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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,133	11/29/2001	Guy Alan L'Heureux	115.0005	3398

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DURHAM, NC 27713-7736

EXAMINER

PANNALA, SATHYANARAYA R

ART UNIT	PAPER NUMBER
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2177

DATE MAILED: 04/22/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/997,133

Applicant(s)

L'HEUREUX, GUY ALAN

Examiner

Sathyanarayan Pannala

Art Unit

2177

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

"A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made."

2. Claims 1, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murray et al. (US Patent 6,622,142) hereinafter Murray and in view of Koeppen (US Patent 5,761,667) hereinafter Koeppen.

3. As per the independent claims 1, 12, Murray teaches a system for rapid unloading and reorganization of hierarchical databases. Murray teaches as the unloading segments to an external file includes calculation of the RBA for the segment before it is reloaded into the new data set (col. 4, lines 15-26). Murray teaches the claimed step of "monitoring an order in which a large physical sequential data file, which is an IMS OSAM dataset, is stored to multiple logical devices, each of which has an allocatable volume" the control region accepts messages form terminals and builds transaction and queues messages. It logs all message database activity and manages database buffers and usage (Fig. 1, col. 6, lines 2-6). Further, Murray teaches the

claimed step of "analyzing the large physical sequential data file to determine a volume of said file stored in the allocatable volume of each of the multiple logical devices" the blocks are moved into a data space having a large addressing range which as and IMS data set can reach up to 8 GB (Fig. 3, col. 6, lines 27-37). Finally, Koeppen teaches the claimed step of "determining if the total volume exceeds a predetermined threshold which is a percentage of the total allocatable volumes of said multiple logical devices" the IMS file can reach approximately 8 billion bytes in size (col. 6, lines 34-35). Murray do teach the block size needed to reload the segment but does not teach explicitly size of the database. However, Koeppen teaches the claimed step of "determining a total volume stored for the large physical sequential data file from said determined volumes" the header data structure contains the size of the database and the key structure (Fig. 3a-c, col. 3, lines 36-43). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate checking of database size. Murray teaches reorganizing the IMS files in order to store the files in sequence for faster access whereas Koeppen teaches reorganizing files by off loading IMS files using multiple tape drives. The two references are combined to relate determination of the IMS database size. In order to improve the system performance, tuning the database by the system administrator uses the one of the factor as the size of the database col. 1, lines 17-26).

4. Claims 2-5, 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murray et al. (US Patent 6,622,142) hereinafter Murray and in view of Koeppen

(US Patent 5,761,667) hereinafter Koeppen and further in view of Coy et al (US Patent 5,644,766) hereinafter Coy.

5. As per dependent claims 2, 13, Murray and koeppen does not teach reporting the storage space occupied and available. However, Coy teaches the claimed step of “the step of generating an exception report to inform a user that the total volume exceeds the predetermined threshold” the report to the client what space is occupied and the existing modules so that they can be compressed or remove from the store to accommodate (col. 11, lines 14-21). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate checking of database size. Murray teaches reorganizing the IMS files in order to store the files in sequence for faster access. Koeppen teaches reorganizing files by off loading IMS files using multiple tape drives. Whereas Coy also teaches a method for preserving special and temporal locality of sets of related objects when moving the sets within a storage hierarchy via a common server. The three references are combined to incorporate the reporting to client whenever the free space is less that the requested. In order for the client to request to reduce the database size, reporting is necessary to know the current space utilized by the database.

6. As per dependent claims 3, 14, Coy teaches the claimed step of “the step of automatically emailing the exception report to the user” ( examiner interprets that the reporting could be an email) (col. 11, lines 14-21).

7. As per dependent claims 4, 15, Coy teaches the claimed step of “the step of: reducing the size of the large physical sequential data file” the server first determines if

the number of archival media instances can be reduced and then when possible, reduces the number of archival media instances (col. 11, lines 14-21).

8. As per dependent claims 5, 16, Coy teaches the claimed step of "the IMS OSAM dataset is guaranteed space and the multiple logical devices are a plurality of disk memory storage devices" the object placement management system locates media instances in a lower level of the storage hierarchy for a logical cluster by first attempting to find the set of media instances that already contain the logical clusters (Fig. 4, col. 8, lines 42-50).

9. Claims 6, 8-11, 17, 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murray et al. (US Patent 6,622,142) hereinafter Murray, in view of Koeppen (US Patent 5,761,667) hereinafter Koeppen, in view of Coy et al (US Patent 5,644,766) hereinafter Coy, and further in view of Pastilha et al (US Patent 5,678,044) hereinafter Pastilha.

10. As per dependent claims 6, 17, Pastilha teaches the claimed step of "step of analyzing the large physical sequential data file further comprises: performing an IDCAMS LISTCAT against the data file to determine if the data file is guaranteed space" LISTCAT is a control statement directs the operation of IBM utility named as IDCAMS to provide the requested item (Fig. 1, col. 6, lines 18-21). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate LISTCAT control statement to provide the requested item to the client. In order to provide the requested information control statement are easier to use rather than writing a series of Job control language instructions.

11. As per dependent claims 8, 19, Pastilha teaches the claimed step of "step of monitoring further comprises: performing a SUBLISTC routine for the dataset and returning a gts flag, last volume, total number of volumes, and a predetermined number of occurrences of volume serial numbers for the dataset" SUBLISTC is another command" SUBLISTC is a command similar to LISTCAT is a control statement directs the operation of IBM utility named as IDCAMS to provide the requested item (Fig. 1, col. 6, lines 18-21).

12. As per dependent claims 9, 20, Pastilha teaches the claimed step of "step of monitoring further comprises: reading an output from the SUBLISTC routine and returning gts flag and last volume information" SUBLISTC is another command" SUBLISTC is a command similar to LISTCAT is a control statement directs the operation of IBM utility named as IDCAMS to provide the requested item (Fig. 1, col. 6, lines 18-21).

13. As per dependent claims 10, 21, Pastilha teaches the claimed step of "the step of: executing an IEHLISTR routine" IEHLISTR is a utility command similar to DCOLEECT as sated in the specification and it deals with files. This command requests information form files system concerning actual volume where data set resides. (Fig. 1, col. 6, lines 34-43).

14. As per dependent claims 11, 22, Pastilha teaches the claimed step of "the steps of: reading an output from the IEHLISTR subroutine; and returning total free cylinder information" IEHLISTR is a utility command similar to DCOLEECT as sated in the

specification and it deals with files. This command requests information from files system concerning actual volume where data set resides. (Fig. 1, col. 6, lines 34-43).

15. Claims 7, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murray et al. (US Patent 6,622,142) hereinafter Murray and in view of Koeppen (US Patent 5,761,667) hereinafter Koeppen, and in view of Coy et al (US Patent 5,644,766) hereinafter Coy and further in view of Donovan et al (6,012,032) hereinafter Donovan.

16. As per dependent claims 7, 18, Donovan teaches the claimed step of "step of analyzing the large physical sequential data file further comprises: executing a DCOLLECT utility against a volume table of contents on each of said disks to extract information about the physical file stored on each disk" IDCAMS and DCOLLECT are utility programs of IBM and cannot be claimed, For example, Dcollect D record, a VOTC scan record process flow is shown. VOTC is a table on DASD describing each data set on the volume (Fig. 7, col. 7, lines 27-40). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate listing of Volume of table. In order to list the DASD information the utility control statements like DCOLLECT are easier and simpler to use.

### ***Conclusion***

17. The prior art made of record, listed on form PTO-892, and not relied upon, if any, is considered pertinent to applicant's disclosure.



Art Unit: 2177

**18.** If a reference indicated, as being mailed on PTO-FORM 892 has not been enclosed in this action, please contact Lisa Craney whose telephone number is (703) 305-9601 for faster service.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sathyanarayan Pannala whose telephone number is (703) 305-3390. The examiner can normally be reached on 8:00 am - 5:00 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (703) 305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*SRP*  
Sathyanarayan Pannala  
Examiner  
Art Unit 2177

srp  
April 18, 2004

  
GRETA ROBINSON  
PRIMARY EXAMINER